1.

A 10 kg rock is at rest when a boulder of unknown mass collides with it. After the collision the 10 kg rock travels at 3.0 m/s south. What is the boulder's change in momentum due to the collision?

A.  15 kg m/s south
B.  15 kg m/s north
C.  30 kg m/s south
D.  30 kg m/s north

2.

A 1.5 kg physics block is sliding at 8.0 m/s north when it is hit by a 0.40 kg ball of putty going 20 m/s west. The putty sticks to the block. What is the magnitude of their combined momentum after the collision?

A.   4.0 kg m/s
B.   8.9 kg m/s
C.  14 kg m/s
D.  20 kg m/s